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ABSTRACT

This report presents guidelines for establishing the educational rationale for Landscapes for Learners, a school grounds development initiative designed to support the curriculum while protecting children from health risks and providing high quality space in the community for education and recreation. The guidelines link the value of educational landscapes to the mandated British Columbia school curriculum. The recommendations outline a pathway to change, including the removal of barriers for school community-based initiatives on school grounds. The appendices describe the maintenance and design parameters of those landscapes and provide helpful tips on the school- based process of project implementation in maintenance, design, and activities surrounding school community participation. (GR)

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School Ground Guidelines.

Landscapes for Learners

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Introduction

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Educational landscapes offer wonderful opportunities for curriculum related activities...**and you don't even have to take a bus.**

School grounds can and should support curriculum, protect children from health risks, and provide high quality educational and recreational space in the community. School community-based initiatives to green school grounds provide these benefits, at comparatively little cost to School Boards.

The **Intent of these Guidelines** is to establish the educational rationale for creating Landscapes for Learners. The guidelines are primarily directed at school community groups (parents, teachers, students and community members) who **choose** to design, establish and maintain Landscapes for Learners on school grounds. The appendices describe the maintenance and design parameters of those landscapes, as well as helpful hints on the school based process of project implementation. The recommendations outline a pathway to change including the removal of barriers for school community-based initiatives on school grounds.

The guidelines link the value of educational landscapes to the mandated British Columbia school curriculum.

The guideline goal and objectives are to be realized through the close collaboration between school communities and school board facilities maintenance staff. It is acknowledged that each school district, as well as each school site, is unique. The guidelines are intended to be adapted to suit the needs of each district.

Creating educational landscapes on school grounds is a complex task with tremendous benefits. It may take several years of voluntary stewardship before all the benefits can be realized. The full support and involvement of the school community is paramount to project success. Recognizing that school community groups can be amazingly resourceful, the guidelines provide direction in making their landscape visions become a reality<.

The state of the natural environment is a major concern for children, yet they often feel as if they have no power to change things. By empowering children to take positive action in shaping their school environment, they will have the opportunity to acquire the knowledge, skills and attitudes needed to contribute toward solving some of the social and environmental challenges that humanity faces. Supportive adult actions working with children, to change their school ground into Landscapes for Learners demonstrates, to them that adults care about their concerns, and their future.

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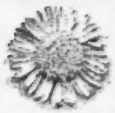

Goal

The goal of Landscapes for Learners is to provide a guide for school-based groups who aim to achieve educationally and environmentally sound benefits from their school grounds.

Objectives

Connect the curriculum to Landscapes for Learners by

- involving students in the design, creation, maintenance and study of a variety of landscapes to meet desired learning outcomes.
- providing a healthy, welcoming, and safe learning environment.
- providing landscapes that are relevant, equitable and accessible to all students.
- establishing defined areas for different activities.
- establishing some defined areas of interest for different age groups.

Increase the awareness of linkages between the school structure, and site development

- by extending the classroom learning environment to the outdoors.
- through appropriate landscape design and management, including Crime Prevention Through Environmental Design (CPTED).
- by creating landscapes that are sustainable and easy to maintain.
- by integrating the school grounds into the local bioregion.
- with the aim to use land, material and water in an efficient, holistic manner.
- with the aim to use strategic plantings around buildings to maximize energy efficiency.

Establish diversified school grounds as community educational and recreational resources, including

- areas to demonstrating natural ecosystem functions.
- passive play, rest and recreation areas.
- active recreation areas.

Provide shade for students from harmful UVB rays, giving

- easy access to shade from all areas on a school grounds.
- accessible shade at different times of the year.

Enhance the school ground

- as an aesthetic community resource.

Develop awareness of the school community's role in creating educational landscapes through

- communication and collaboration with ground maintenance staff.
- a community decision making process.
- creating partnership linkages with funding agencies, school districts and local government authority.
- written agreements on landscaping design, implementation and maintenance plans.

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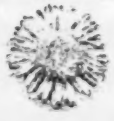

Curriculum

Principles of Learning

Learning requires the active participation of the student.

People learn in a variety of ways and at different rates.

Learning is both an individual and a group process.
(Source: British Columbia Ministry of Education)

Environmental Education Principles

- Direct Experiences
- Responsible Actions
- Complex Systems: Ecological, Economic and Social Systems
- Consequences of Actions
- Aesthetic Appreciation
- Environmental Ethic
- Personal Reflection

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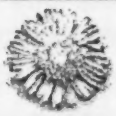

Clarification of Responsibilities

The whole school community is involved in the collaborative process of creating and maintaining Landscapes for Learners: maintenance staff, parents, educators and students.

The Facilities Branch, Ministry of Education, Skills and Training shares with local school boards responsibility for the management of real property and capital assets. Included in this is the establishment of design guidelines and funding allowances for school buildings and sites. In relation to existing school sites, school boards receive block funding from the ministry to maintain existing school facilities, which includes the building and the grounds. It is at the discretion of the board to distribute those funds.

School boards have the responsibility for the safety of children on school grounds. Care and maintenance of the school grounds is most often performed by school district personnel. Contractual agreements between maintenance employees and employer may be different in each school district, yet will determine what work the school community can undertake. Ideally, each school district will develop its own guidelines, through the close collaboration between school community representatives, district unions, district facilities departments and the school board. To avoid misunderstandings, those guidelines could outline the allowable stewardship actions of school communities. It is intended that the guidelines comprise a flexible, evolving document that can be adapted to suit the needs of each district.

The success of community based landscaping initiatives depend on:

- ongoing communication between a school community representative and the grounds maintenance staff.
- a conceptual design of the entire site illustrating the long term plan, divided into phases.
- landscape designs that are kept within the budget, implementation and maintenance

capabilities of the school community and the School District.
- final design plans approved by the grounds maintenance staff.
- a commitment by the school community to take responsibility for the cost and maintenance of the landscapes that they create.
- a **written agreement** between the school community and the grounds maintenance staff clarifying roles, responsibilities and actions to be taken.

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Benefits

Education

School grounds which actively engage students, offer extraordinary opportunities for learning. A multitude of learning experiences can be realized on school grounds. For example, educational landscapes connected to the curriculum, provide educators the opportunity to:

- initiate direct experiences to improve the relevance of what is being taught.
- provide a forum for the study of climate change.
- cater to a wide range of student needs, learning styles and modes of expression.
- make science education more practical and learner centred.
- give children the empowerment to make a personal contribution toward improving their community.
- provide opportunities to integrate knowledge and skills, reflecting the wholeness and interconnectedness of learning.
- demonstrate that life on earth depends on, and is part of, complex social and ecological systems.
- encourage students to reflect on a range of views, and ultimately make informed and responsible lifestyle choices.
- promote the positive use of democratic decision making, communication skills and teamwork.
- strengthen partnerships through the cooperation and collaboration among students, educators, families, ground maintenance experts, and other members of the community.
- promote cross cultural understanding of the natural environment.
- support creative play in environments that have interest, and encourage interaction with the natural world.

Students can learn about their connections to the natural world through all subjects.

Environment

School grounds have the potential for modeling natural ecosystems that benefit wildlife, and to demonstrate those systems to the broader community. They make excellent learning grounds for our young people to take the first tentative steps towards making a more sustainable, livable world. By maximizing the use of our public lands, students can learn how to become good stewards of their community spaces.

It is timely to start considering school grounds as environmentally friendly community spaces.

Community

Well designed school grounds bring positive benefits to the whole community. They provide both active and passive recreational areas and add value to a community by improving the quality of life.

Health

Physical Health

Safe, outdoor environments should be part of the learning experience in public schools. For example, there is a need to protect the health of our school children from harmful UVB sun rays. Trees and other forms of sun screening, strategically placed on school grounds provide students with some shelter. Groves of trees are more effective sun screens than stand alone trees. Through appropriate environmental design and management, school grounds can provide shade that is easily accessible to students, from all areas of the school ground.

Emotional Health

Allowing students to engage in *making a difference* to their place on earth promotes a sense of community, belonging and ownership. It gives students the empowerment to know that their actions are meaningful and relevant. Experiencing and caring for the natural world improves students' self esteem and contributes to their healthy mental state.

"Our world is urbanizing with astonishing rapidity ... opportunities for our children to know the living and physical environment of the out-of-doors are diminishing. To extend the classroom to a naturalized school ground with its many lessons is becoming a necessity not an alternative."

Dr. Bert Brink, Naturalist.

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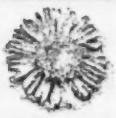

Potential Landscape Types

Listed below are landscape types that are possible for school grounds. The school community may decided to address each landscape type and include some of the listed elements. The desired elements may vary depending on the eco-region of the school district. Some of the landscape elements will be more suited to specific sites than others.

Landscape Types	Desired Elements
School Ground Entrances	Large, canopy trees framing the entranceways, roadside trees, trees planted along the edge of any adjacent parks, safe drop off areas.
Buildings Entrances	Eg: gathering spaces for crowds, seating opportunities, small decorative shade trees, shrub plantings, canopy of trees, floral displays, bike racks, flagpoles, extended roof cover, school signage.
Athletic Field	Sports Field: access to shade trees close to field for both player and spectators, shaded 'dug out' area, columns of trees, water, seating opportunities, viewscapes
Hard Surface Areas	Sport courts: access to shade, rest areas, benches, water, waste receptacles.
Adventure Play Equipment	Play equipment: safety zone, rest area, benches, access to full shade, water. Play equipment must meet CSA standards.
Pathways	Eg: hard surface, gravel, shade opportunities, corridors of trees, benches.
Feature Areas **(need sturdy structures)**	Specific items for special activities could include: seating, tables, enclosed courtyard, conversation areas, large group meeting area, outdoor classrooms, cluster tree plantings, orienteering courses, bridges, arbors, gazebos, tunnels, upright logs, driftwood, large tree stumps, climbing trees, dry leaf piles (to jump in), sandpits, large flat boulders, retaining walls, berms, mounds (mini hills), depressions, sliding areas, a pump well, waterscapes, play structures that can be moved and manipulated.
Mini Ecosystems **(signage)**	Examples are: regional native successional forest demonstration areas, restoration projects, natural history and ethnobotany trails, grass meadows (mowed once a year in late fall), wildflowers, wildlife plantings, thorny songbird thickets, hedgerows, wildlife trees, nurse logs, rock pile habitats, toad homes, butterfly gardens, hummingbird gardens, hummingbird feeders, bird baths, nest boxes, bat houses, amphibian pools, wildlife garden ponds, wetlands, streams, barn for domesticated farm animals.
Other Nooks and Crannies **(need sturdy structures)**	Multi-sensory plantings including (taste, smell, touch, sound & sight) ie: sniffy gardens, peace gardens, ethic gardens, quiet reflective spaces for individual or small group gatherings, sculptures, rock gardens, planter boxes, large containers, window boxes, food gardens, herb gardens, senior students' corner, conversation areas, orchard, native plant nursery, greenhouse, rooftop gardens, water catchment systems for irrigation, composts.

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Landscape Zones within School Grounds

A common thread that all school grounds share are listed in the chart below. Physical descriptors will need to be adapted to each site.

PHYSICAL ZONES

	Location/Types	Intensity of Use	Value	Initial Construction Requirements	Long Term Maintenance
Zone 1 Entrances	**School Ground Entrances**	Medium	Aesthetic Community	High	High
	Building Entrances	Very High	Asset	High	High
Zone 2 High Activity Play Areas	**Athletic Fields**	Medium	Physical Education Community Usage	High	High
	Hard Surface Areas	High		High	Medium
	Adventure Play Equipment	High		High	High
Zone 3 Transitional Areas -between the entrances and the high activity areas	**Pathways**	Very High	Corridors Social Interaction	High	Low
	Feature Areas	Medium	Broad Curriculum Connections	High	Medium
Zone 4 Perimeter & Other Spaces	**Mini Ecosystems**	Low	Broad Curriculum Connections	High	Low
	Nature Plant Study Areas	Low	Quiet, Social Interactions	High	Low
	Nooks and Crannies	Medium		High	Medium

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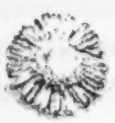

Recommendations to the Ministry of Education, Skills and Training

- Continue to support the value of educational landscapes and shade areas on school grounds.
- Recommend that School Districts support community-based initiatives.
- Take steps to link the curriculum to educational landscapes.

- Financially support the development of model school grounds that demonstrate the curriculum links to school community-initiated landscape projects.
- Set yearly budget allowances for the creation and maintenance of specific educational landscape items and shade trees on existing school sites.
- To ensure the planting success of landscapes on new school sites, provide financial support for the maintenance of those grounds for three years.
- Allocate funds specifically for ground maintenance staff training.
- Form an inter-ministry advisory committee with student, teacher, ground maintenance and community representation.
- Appoint a coordinator who will:
  - assist facilities branch field services, coordinate school ground audits and user group satisfaction surveys.
  - identify and train key individuals in each school district as change leaders.
  - implement the recommendations of the committee.
  - coordinate the communication between the Curriculum Branch and the Facilities Branch.

Recommendations to School Boards

- Seek Ministry support to develop district school ground guidelines. The guidelines should reflect the educational, recreational and health needs of your school communities.
- Support stakeholder planning processes that result in:
  - an overall conceptual landscaping plan for each school site.
  - a phased implementation plan for each school site.
- In consultation with the school community outline a **'written agreement'** that defines the roles, actions and responsibilities by both the school community and the ground maintenance staff.
- Maintain processes that will sustain a collaborative relationship between maintenance staff and school communities, for example:
  - allocation for ground maintenance staff consultation time.
  - allocation for ground maintenance implementation time for school community projects.
  - ensure that any new or substitute ground maintenance employees have a maintenance scheduling sheet for each school site. The scheduling sheet should describe the maintenance responsibilities, as outlined in the **'written agreement.'**
- Consider providing 'matching funding' or 'in-kind donations' in agreement with school communities to assist with labour, machinery or landscape materials costs .
- Purchase land for new school sites in accordance to the site selection guide. Give consideration to:
  - establishing third party covenants.
  - preserving environmentally sensitive areas.
- Provide professional day training for ground maintenance staff in:
  - the school community consultation process.
  - the maintenance and horticultural requirements of educational landscapes.
  - educational landscape design.

Recommendations to School-Based 'Greening Committees'

- Create a greening committee in your school that has representation from parents, educators, students, and community advisors.
- Allocate one representative from the greening committee to communicate with the ground maintenance staff.
- Assist your School Board with the writing of local school district guidelines, with

stakeholder input.

- Provide training to parents, educators and students in the process of creating school ground educational landscapes.
- Plan for long term stewardship of the community-based projects, for example: a summer watering, weeding and yearly mulching program.
- Create models of educational landscape school grounds as positive examples to other school groups within your school district. Publicize the benefits of the community process and the landscapes.
- Follow the **written agreements** set out with the ground maintenance department that defines the roles, actions and responsibilities of your school community-initiated projects.

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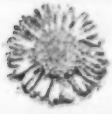

APPENDIX ONE

Maintenance Considerations

During the design phase of a school ground landscaping plan, it is helpful to give forethought to the long term site maintenance implications. Since each school site is unique it is advisable to have the site assessed by a landscape architect and ecologist during the landscape planning phase.

WATER: Consider

- the watering options: buckets, hoses, or an underground sprinkling system. Note the location of the water tap outlets.
- the practice of xeriscaping by using drought tolerant plants that are adapted to the local environment and require minimal amounts of water.
- hose and reel purchase and storage.
- a community volunteer summer watering schedule (obtain a water tap key).

MULCH: Use organic, composted leaf mulch. Mulch spread twenty centimetres thick, will retain water, control weed growth and add nutrients to the soil. Add new mulch every year.

GARDEN SIZE: Plan with low level maintenance requirements in mind. It takes at least two years of extensive care before a garden becomes fully established. Design landscapes that are not too complex for the school community to construct. It is desirable to have an overall landscaping plan of the school site, yet plant in small, manageable phases. Try to avoid making the mistake of planting a garden area that is too large for the volunteer school community to maintain over time.

ATHLETIC FIELDS: Plant trees that are far enough away from an athletic field that the mature tree canopy won't enter over the field. To provide students and spectators a place of refuge from the sun, consider planting a grove of trees adjacent to, or between athletic fields. Ideally the grove should be located on the West or North side of the field. Planting in these directions leaves the athletic field in sun, yet provides a refuge for students to move into.

ADVENTURE PLAY GROUNDS: There is a possibility that a shaded adventure playground may get slippery and become a safety hazard. Consider planting trees on the West or North side of an adventure playground so that the trees can provide a filtered shade-refuge for the students.

BUILDINGS: Determine the mature canopy growth of the shade trees that you wish to plant near the school building. Plant them far enough away so that the canopy will not extend over the roof of the building. Small trees and shrubs are acceptable as foundation plants.

PORTABLES: Realistically, portables may stay on school grounds for extended periods of time. Rather than ignoring the spaces near the portables, consider planting hardy, inexpensive trees nearby. Give consideration to:

- the truck route along which current and future the portables will be accessed and removed.
- the aesthetics and safety of the plantings after the portables are removed.
- planting trees with large wire root balls may make future transplanting more successful.

EMERGENCY EXITS: Keep the area in front of entrances and fire exits clear of shrubbery for approximately six metres. Check with your fire department for local guidelines on planting distances from exits. Side plantings may be acceptable.

INVASIVE ROOTS: Identify the location of the schools water, sewer, gas, electrical and drainage lines. Avoid planting trees that have invasive root systems near these lines in order to avoid disturbance. Shrub gardens are acceptable. Most trees, if they are planted with a wide base of topsoil, will not cause structural damage to a school building.

WATER CATCHMENT BASINS: Avoid planting deciduous trees, with large leaves, near water catchment basins. The leaves could potentially plug the drain.

DRAINAGE: Locate the drainage lines by referring to a school site plan. They are often found along boundary edges. Avoid planting trees that have a 'water loving' root system near these areas as they could potentially block the drainage line.

NEIGHBOURS: In respect for your school neighbours, consult with them before planting along their fence line. Tall trees planted to the south of a neighbour's property may block the sunlight or the viewscape from their garden. Your neighbours may consider plantings next to their fence line as either a positive or negative attribute.

MOWING CONSIDERATIONS: In general, ground maintenance staff have limited time and resources. The strategic planting of gardens, requiring the minimal number of tractor turns, will assist the driver in mowing the lawns within an acceptable time frame.

- Trees with small leaves are preferred in high activity areas, as the leaves will be mulched by the mower.
- It is easier to mow the lawn when the trees are placed in raised bed clusters, or in a straight line.
- A cluster of plants in an oval shaped garden can be easier to mow around than a rectangular shaped garden.
- To determine the ideal width of a cluster garden, consult with the ground maintenance department as to the width of their tractor tray swing. A wide swing with the tractor, around trees, saves time because the grounds staff will not need to come back later with the weedeater.
- Check with your maintenance department as to the cutting width of their mowers. Most mower cutting widths are three metres. Allow an appropriate space for the mower to maneuver between planting areas.
- In areas where large, fast mowers are used, such as athletic fields, ensure that the branches

of trees are far enough away that they are not going to be a hazard for the driver.

BARK PROTECTION: Action needs to be taken to protect the bark around a tree - if it is damaged, the tree may not survive. A barrier will minimize the damage from a tractor or a weed eater. Consider placing landscaping ties, posts, logs or rocks to define a newly planted area. In open grass areas, it may be necessary to set in fence posts to protect the area. These posts serve to define the cluster planting areas, and can also be used to label the plant species. Rows of upright logs can also make an inexpensive, yet effective barrier. Single trees in wide open spaces, can be protected by three fence post stakes, secured by canvas ties, and surrounded by deer fencing. Another method of protecting a new tree from weedeater damage is use corrugated drainage pipe, slit and stapled together around the base of the tree. Check with your local maintenance department on their preferred forms of barrier.

STAKING: When selecting your deciduous trees, choose trees with at least a six centimetre trunk diameter. Trees with a smaller caliper can be easily snapped off. In order to survive on school grounds, deciduous trees must be very firmly staked outside the rootball of the tree. Ideally, they should be wrapped with heavy canvas ties stapled to three, 4 inch fence posts. Ask for the assistance of your ground maintenance staff in the method of properly staking deciduous trees. Coniferous trees are less susceptible to vandalism. Select coniferous trees that are at least two metres tall.

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APPENDIX TWO

Design Considerations

EXISTING AND FUTURE FEATURES: During the design stage undertake a neighbourhood and site assessment of existing and historical landscape features. Determine the present and future usage of the area. Data collection, photographic evidence, opinion surveys, graphing and analyses may be undertaken by students, with adult supervision.

RETAIN RATHER THAN CREATE: It is expedient to retain existing natural features, rather than to create new, highly manicured landscapes.

SET THE STAGE: Large trees placed adjacent to a high use area help to set the stage for future plantings. In high use areas, a few large trees protected with borders are more likely to survive than many small trees. An understory of associated shrubs and ground covers will help to protect and define the area as a passive play garden.

PERIPHERY PLANTINGS: Look to the edges of the school site to determine potential periphery plantings. Consider partnering with the Parks Board in planting large deciduous roadside trees. Think about extending plant areas that are adjacent to existing natural areas. They are often ideal as native plant study areas.

PLANTERS: Trees in planters have a better chance of survival if the base of the roots actually touch at ground level. Keep the planter soil level no more than twenty centimetres from the ground level. Select drought tolerant plants and be prepared to water raised planters frequently

as they tend to dry out faster than ground level plantings.

PLANT SPECIES SELECTION:

1. Remove any invasive, exotic species of plants that may be on your school site, before starting a planting project.

2. Select plant material suitable to the unique conditions of the site. Hot & dry, low and damp, sandy versus clay soils. Each plant has specific environmental needs and will thrive only when these conditions are met.

3. Do an analysis of the soil for fertility, drainage and moisture before selecting plant species. The hard packed soil adjacent to school buildings is usually alkaline. The peripheral, less disturbed areas of the school ground often has acidic soils. Choose your plant species accordingly.

4. Wherever feasible use regionally native plants. In general, native plants are better adapted to local growing conditions, requiring less water and maintenance than exotic species. They are also most likely to have habitat value for native wildlife populations. Native plants tend to survive best in acidic, undisturbed soils. Test the soil and, if appropriate, add peat to make it more acidic. It may be necessary to undertake extensive soil conditioning before planting native plants near school buildings.

5. If it is not feasible to use a regionally native plant, consider using a horticulturalized version of a native plant, or a non-invasive plant that is indigenous to North America.

6. Give preference to plants with wildlife values.

7. Some exotic shade trees have a high survival rate in disturbed alkaline soils. Consider choosing attractive, sterilized, exotic species of plants that are effective at providing shade and/or have good wildlife values.

8. In areas where shade is desirable, consider planting a mixture of fast growing deciduous trees and slower growing coniferous trees. For safety reasons, check that the location of the mature coniferous trees will not completely block sight view lines.

9. When planting in open spaces, choose tree species that have a wide range of tolerances to moisture.

10. A quick clue to the type of area a plant is best suited for is to look at the colour and size of the leaf. In general, plants with small, light coloured leaves prefer full sun, whereas plants with large, dark green leaves prefer to be planted in shaded areas.

11. Species that occur in nature with a broad geoclimatic zone are most likely to be tolerant to different conditions. Look for trees with a wide southern distribution, that can withstand frosts.

ETHICS: Purchase regionally native plants from a nursery that propagates their own trees. Do not purchase native species from nurseries that collect from the wild.

NATIVE PLANT AVAILABILITY: Native deciduous trees with a 5-6 cm caliper can sometimes be difficult to find in Nurseries. To ensure that the plants on your purchasing list are available, it may be necessary to order plants well in advance of planting.

A Native Plant Guide

AESTHETICS:

- Place benches facing viewscapes. A treed area planted behind a bench is attractive.
- To prevent erosion on a steep bank, consider building reinforced log steps down portions of the slope.
- Check that you have a balance of plant colour and plant fragrances in your landscaping plans.
- Consider hiding unpleasant views such as dumpsters.

WET AREAS: In wet areas, plant water loving plants or raise the planting bed about twenty centimeters to prevent the roots from becoming water logged.

RIPARIAN EDGES: Retain or create riparian habitat along water courses.

PROTECTION FROM SUN RAYS:

- In areas where shade is a priority, choose trees that form leaves in the early spring, rather than those that have a later leaf formation. Give consideration to planting a few coniferous trees or building a sturdy gazebo.
- Groves of trees are more effective at providing shade than a single tree.

ALLERGIES: Avoid planting trees that produce excessive amounts of airborne pollen, such as the male cottonwood. Some students may be allergic to the pollen.

POISON: Check with a botanist to make sure that none of the berries, leaves or bark on the plants that you have chosen are toxic.

CRIME PREVENTION:

1. Contact your local police to discuss safety issues and review 'Crime Prevention Through Environmental Design' (CPTED). CPTED is a group of strategies intended to reduce the fear of crime and opportunities to commit crimes.
2. The playground supervisors should be able to have a reasonably clear view of all areas on the school ground from convenient viewpoints.
3. In 'high risk' areas, plant shrubs that will grow no higher than knee height.
4. Prune mature trees to the shoulder height of an adult. Plant low shrubs or ground cover at the tree base.
5. Consider planting prickly plants in areas where you want to discourage prowlers.

WILDLIFE TREES: Rather than removing a rotting tree, consider keeping it as a wildlife tree for woodpeckers and cavity nesting birds. Have an arborist evaluate the safety of wildlife trees, particularly if they are in a high use area. Post a sign indicating the educational and wildlife values of the wildlife tree.

For further information on wildlife trees contact the Provincial Ministry of Environment, Project Wild Coordinator.

TIMING:

1. Consult with your local nurseryman for best times of the year to plant in your region.

2.Check with your municipality parks department, as they may have large caliper trees, fence post stakes, cnavas ties, soil or mulch to give away to schools.

3. Every nursery has a bargain area that is worth checking for low prices. Most nurseries

clear out their stock in late fall to make space for Xmas tree sales.

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APPENDIX Three

The School Community Participation Process

Suggested Planning Steps

- Survey the school community informally for support of a shade and/or naturalization project. Talk to the school administrator, teachers, parents, and students.
- Communicate with other schools that have launched a project. Network!
- Get a binder. For ease of project management, keep all information resources, newsletters, funding applications, quotes, receipts and photos in one location.
- Establish a school 'greening' committee within your school, comprising of lead students, teachers, and parents. The involvement of the committee members provides continuity during the planning, implementation and maintenance of a project.
- Write a brief outline giving the reasons for the project: clarify your goals, give the benefits, state the intended decision making process, indicate funding possibilities and suggest an draft implementation process. Distribute the outline to interested staff and parents. Request that they make comments on the outline.
- Ask the administrator to obtain a school site plan from Ground Maintenance. It should indicate the sanitary lines, Ask waterlines, gas lines, drainage tiles or pipes, water catch basins, electrical lines meter, fire lanes, and future building expansion plans. The site plan is an invaluable tool for the greening committee as it will allow unsuitable locations to be quickly identified. NOTE: *For safety reasons the site plan should be kept reasonably confidential.*
- Appoint one person from the greening committee to communicate with the ground maintenance foreman. It is critical to begin the communication process with the foreman at the beginning of the planning phase. Their technical expertise and assistance in determining ideal locations for projects is invaluable. To avoid misunderstandings, keep them informed at all phases of the project.

Funding

It is advisable to submit a DRAFT proposal to the funding agency as early as possible, as it can take several months for funding proposals to get processed.

Talk to the funding agency coordinator to ensure that you have followed the required process and to learn of any changed funding criteria. Send the funding applications. Support your application with letters of approval from the ground maintenance department and the school administrator. Submit a short outline of: the estimated cost, the goals, the rationale for the location, the social and environmental benefits to the community, the process followed for community decision making, and the process that you intend to follow for the project implementation.

Community Consensus

- Make a short presentation to your Parent Advisory Committee (PAC) and to the staff. Obtain their official support, in principle, for the project.
- Determine the learning outcomes that will be met in creating the landscape.
- Identify and prioritize the potential project areas. Give consideration to the shade, safety, wildlife and aesthetic value of your project. Determine the short and long term maintenance implications. Your research will help focus others.
- Meet regularly with the school greening committee. The effort to green your school ground is by consensus. A workshop brainstorming and prioritizing session allows everyone to give input into the potential design of the school grounds.
- Make a few general inquiries about possible local community donations (monetary, materials or time donations). If a project is being organized by PAC it may be possible to use a parent's business license to purchase from wholesale nursery outlets. Start making material cost inquires for estimated amounts. Consider delivery and tax costs.
- Keep the administrator and the community informed at all times through posters and announcements in the school newsletter. The administrator needs to have copies of the funding applications and other communication.
- Continue to request landscaping design suggestions from the students and others in the community. There needs to be an open invitation for participants to sit on the planning committee. To foster community stewardship, it is important that the community is involved in decision making processes. Consensus takes time, but the rewards are worth the effort!
- For further information on Stewardship refer to the publication 'Stewardship Options' ISBN 0-7726-2924-2 Phone: 1-800-387-9853
- If feasible, an overall conceptual architectural landscape plan of the entire school site is desirable. Divide the plan into manageable phases.
- Consult with a Landscape Architect to achieve a more professional result. The landscape architect will be able to ensure that all technical considerations have been taken into account. He/she may be able to offer design or plant species choice modifications. Choose a landscape architect who is willing to give meaningful consideration to the input from the school community, and who has the communication skills to participate in a group decision making process.

  The educational process of democratic decision making will foster community stewardship and is just as important as the finished product!

- Create a draft plan. Try and keep the scale of the drawing reasonably accurate. A scale of **1:200 (1cm = 2m)** works well. Consider the appropriate placing of plants depending on: infrastructural considerations, soil conditions, sun exposure, mature tree canopy width, wildlife values and safety factors. Distribute the plan and respond to the feedback.
- To promote project ownership, include the students in the all stages of the school ground landscaping projects.

Permission

Once the ground maintenance department has a sketch, they will come out and view the site with the administrator, and other interested parties. Permission will then be given to proceed, or alternative plans suggested. Confirm the parameters of the permission given in writing so that there are no misunderstandings by either the school community or the ground maintenance department. Forward a copy of the permission letter to your school board representative, for information and insurance purposes. Confirm funding grants and/or material donations. Make approved design adjustments if necessary.

The Big Day

- Plan the community planting/building day: order materials, arrange for material delivery and payment, request volunteers, access any tools that are needed, consider safety factors, list tasks, train task leaders, and estimate the timeline. Sometimes the school maintenance department will offer to come and loosen the soil, or to dig the large holes with a bobcat. This help is especially valuable in areas where the soil is compacted. Invite the students that have graduated from the school to come back and assist with the community planting day. It'll be great to see them again and it may help in fostering community stewardship.
- Contact the media so that others may be inspired to follow your example and to indicate to the students that **the action is valued by the community.** Record the event with before and after photographs.
- Hold the community planting day. Have a few leaders come early to position plants and materials. The plant positions can be marked with either the actual plant pot, or by using labeled popsicle sticks. It is most useful to have the plant species name attached and written on surveyors tape. Provide refreshments (everyone brings their own cup).

SUPERVISE !

- Label all tools.
- Have one person greeting and organizing volunteers.
- A second person needs to closely supervise plant locations, etc.
- A third person needs to be solely responsible for monitoring safety. All tools that are not being used should be placed in a central location.

Concluding Activities

- Thank the participants and the funding agencies.
- Give a list of all participants and community/business donors to the Administrator so that the school can publicly thank them for their contributions.
- Write an article on the project and distribute it.
- Display before and after photographs in the school foyer as benchmarks of progress.
- Complete the finances. Store the records.
- Plan for on-going maintenance: watering, weeding, mulching, collecting fallen branches.

Determine the future learning outcomes that will be met once your landscape is established. There will be multiple connections to the curriculum in almost every subject area.

CELEBRATE and ENJOY !

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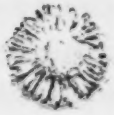

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Landscape for Learners was written in 1996 by Linda George, founder and manager of the

Greening Schoolgrounds Program, WBT Wild Bird Trust of British Columbia.

[Participating Schools]

[Program Outline] [School Ground Guide]

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